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Plant Health

Citrus Greening

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Symptoms of Citrus Greening Infection



Figure 1. Yellowing of a citrus shoot caused by citrus greening*



Figure 2. Presence of yellow shoots typical of citrus greening. Photo courtesy T.R. Gottwald and S.M. Garnsey.



Figure 3. Close-up of one leaf showing vein yellowing and mottle.*



Figure 4. Vein yellowing in a greening-infected leaf (top); normal leaf on bottom.*



Figure 5. Symptoms of Citrus Hunglongbing (greening) in Florida . The symptoms are characterized with yellow mottles, and vary from different host plants. A: Sour orange (*Citrus aurantium*) ; B: Lime (*Citrus aurantifolia*) ; D: unknown (Citrus sp.); C, E, and F: Pummelo (*C. maxima*) . Image by Xiaolan Sun, Florida DOACS, Division of Plant Industry.



Figure 6. Citrus greening on *Citrus* (probably *hysti*). Image by Xiaolan Sun, Florida DOACS, Division of Plant Industry.



Figure 7. Citrus greening on pummelo. Image by Xiaolan Sun, Florida DOACS, Division of Plant Industry.



Figure 8. Citrus greening on sour orange. Image by Xiaolan Sun, Florida DOACS, Division of Plant Industry.



Figure 9. Symptoms of citrus greening on mandarin orange fruit. Photo courtesy T.R. Gottwald and S.M.



Figure 10. Zinc deficiency symptoms in citrus.*

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Garnsey.

Insect Vectors of Citrus Greening



Figure 11. Asian citrus psyllid, *Diaphorina citri* Kuwayama, in typical feeding position with raised abdomen. Image: David Hall, USDA-ARS, Ft. Pierce, FL



Figure 12. African citrus psyllid *Trioza erytreae* Del Guercio with eggs. Image: S. P. Van Vuuren, Citrus Research International, South Africa



Figure 13. Asian citrus psyllid, *Diaphorina citri* Kuwayama, nymphal instars. Image: David Hall, USDA-ARS, Ft. Pierce, FL



Figure 14. African citrus psyllid *Trioza erytreae* Del Guercio nymph. Image: Peter Stephen, Citrus Research International, South Africa



Figure 15. Asian citrus psyllid nymph. Image by Jeff Lotz, Florida DOACS, Division of Plant Industry.

Foliar Symptoms of Feeding by African Citrus Psyllid



Figure 16. Citrus leaves, top view, showing pit galls produced by African citrus psyllid, *Trioza erytreae* Del Guercio. *FAO website*



Figure 17. Close up of citrus leaves showing pit galls produced by African citrus psyllid, *Trioza erytreae* Del Guercio. *FAO website*

*From: <http://www.doacs.state.fl.us/pi/enpp/germplasm/exotics.html>

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